Claims

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1. A compound of the general formula

$$X - Q - W \qquad A - z^{1}$$

$$X' - Q \qquad B - z^{2}$$

(I)

in which one of X and X' represents a polymer, and the other represents a hydrogen atom;

each Q independently represents a linking group;

W represents an electron-withdrawing moiety or a moiety preparable by reduction of an electron-withdrawing moiety;

15 or, if X' represents a polymer, X-Q-W- together may represent an electron withdrawing group; and in addition, if X represents a polymer, X' and electron withdrawing group W

each of  $Z^1$  and  $Z^2$  independently represents a group 20 derived from a biological molecule, each of which is linked to A and B via a nucleophilic moiety; or  $Z^1$  and  $Z^2$  together represent a single group derived from a biological molecule which is linked to A and B via two nucleophilic moieties;

together with the interjacent atoms may form a ring;

A is a  $C_{1-5}$  alkylene or alkenylene chain; and B is a bond or a  $C_{1-4}$  alkylene or alkenylene chain.

2. A compound as claimed in claim 1, in which a polymer X or X' is a polyalkylene glycol, a polyvinylpyrrolidone, a polyacrylate, a polyoxazoline, a polyvinylalcohol, a

polyacrylamide or polymethacrylamide, a HPMA copolymer, a polyester, polyacetal, poly(ortho ester), polycarbonate, poly(imino carbonate), polyamide, a copolymers of divinylether-maleic anhydride or styrene-maleic anhydride, a polysaccharide, or polyglutamic acid.

- 3. A compound as claimed in claim 2, in which the polymer is a polyethylene glycol.
- 10 4. A compound as claimed in any one of claims 1 to 4, in which each linking group Q independently represents a direct bond, an alkylene group, or an optionally-substituted aryl or heteroaryl group, any of which may be terminated or interrupted by one or more oxygen atoms, sulphur atoms, -NR groups in which R represents an alkyl or aryl group, keto groups, -O-CO- groups and/or -CO-O- groups.
- A compound as claimed in any one of claims 1 to 5, in which W represents a keto or aldehyde group CO, an ester
   group -O-CO- or a sulphone group -SO<sub>2</sub>-, or a group obtained by reduction of such a group, or X-Q-W- together represent a cyano group.
- 6. A compound as claimed in any one of claims 1 to 6, in 25 which  $\mathbf{Z}^1$  and  $\mathbf{Z}^2$  together represent a single biological molecule
- 7. A compound as claimed in any one of claims 1 to 5, in which each of  $Z^1$  and  $Z^2$ , or  $Z^1$  and  $Z^2$  together, represent a 30 protein.
  - 8. A compound as claimed in claim 7, in which the or each protein is linked to A and B via thiol groups.

9. A compound as claimed in claim 8, in which said thiol groups have been generated by partial reduction of a disulphide bridge.

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10. A process for the preparation of a compound as claimed in any one of claims 1 to 9, which comprises reacting either (i) a compound of the general formula

$$X-Q-W'$$
 $B-L$ 

(II)

10 in which one of X and X' represents a polymer and the other represents a hydrogen atom;

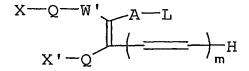
Q represents a linking group;

W' represents an electron-withdrawing group, for example a keto group, an ester group -O-CO- or a sulphone group

15 -SO<sub>2</sub>-; or, if X' represents a polymer, X-Q-W' together may represent an electron withdrawing group;

A represents a  $C_{1-5}$  alkylene or alkenylene chain; B represents a bond or a  $C_{1-4}$  alkylene or alkenylene chain; and

20 each L independently represents a leaving group;
or (ii) a compound of the general formula



(III)

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in which X, X', Q, W', A and L have the meanings given for the general formula II, and in addition if X represents a polymer, X' and electron-withdrawing group W' together with

- the interjacent atoms may form a ring, and m represents an 5 integer 1 to 4; with compounds of the general formula  $Z^1Nu$  or  $Z^2Nu$  or a compound of the formula  $Z(Nu)_2$  in which Z represents a biological molecule, and each Nu independently represents a nucleophilic group.
- 10 11. A process as claimed in claim 10, in which the or each leaving group L represents -SR, -SO<sub>2</sub>R, -OSO<sub>2</sub>R, -N<sup>+</sup>R<sub>3</sub>, -N<sup>+</sup>HR<sub>2</sub>, -N<sup>+</sup>H<sub>2</sub>R, halogen, or -OØ, in which R represents an alkyl or aryl group and Ø represents a substituted aryl group containing at least one electron withdrawing substituent.

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- 12. A compound of the general formula II or III as defined in either claim 10 or claim 11.
- 13. A pharmaceutical composition comprising a20 physiologically tolerable compound as claimed in any one of
  - claims 1 to 9, together with a pharmaceutically acceptable carrier.
- 14. A compound as claimed in any one of claims 1 to 9 for 25 use as a medicament.